

# Desigo® Fire Safety

## Marine Fire and Detection Equipment

### Models FH-2071-UM | BP-62 | USCG-XPLATE

#### Architect & Engineer Specifications

- Marine equipment is used with Desigo 252-point ( Model FC2025 ) and 504-point ( Model FC2050 ) addressable fire alarm control panels (FACPs)
- Robust design allows for protection of equipment in harsh climates and environments:
  - most parts used in Marine fire applications have passed salt-spray mist requirements for Exceptional Degree of Protection , per USCG guidelines, including Models FDOT421|FDO421|FDT421 and Siemens 'H' and 'X'- series devices
- Physical properties of Model FH-2071-UM enclosures include:
  - fully gasket-sealed outer door
  - draw latches for secure closure
  - wire-braided, corrosion-resistant vibration isolators
  - one (1) battery bracket which holds two (2)16AH batteries
  - one (1) AC line EMI filter
- Battery set (Model BP-62) provides back-up, emergency power for Marine-only installations
  - 16AH Standby power @ 24VDC
  - with metal jacket, operable between -40°F / °C to +176°F (80°C)
  - comes with two (2) batteries per order
- Model USCG-XPLATE is required for Marine applications, in order to reduce radio-frequency interference (RFI)
  - Ordered separately, each faceplate fits over Model XTRI-series devices
- UL 864 10th Edition Listed, ULC-S527 Listed
- ABS Type Approval; Lloyd's Register Type Approval
- United States Coast Guard (USCG) Approved, including Exceptional Degree of Protection - CFR, Title 46, Subpart 161.002/ 60/ 0

#### Product Overview

Marine Fire and Detection Control is an advanced Siemens fire-safety system, designed for use with Desigo 252-point (Model FC2025) or 504-point (Model FC2050) addressable FACPs for Marine-specific installs and other harsh-environment applications.

The enclosure used in Marine applications is robust and weather-resistant. Its durable design is customized for Marine installs, due to the conditions at-sea the equipment will regularly encounter. In order to provide secure fastening, each Model FH-2071-UM shipment includes a fully gasket-sealed outer door, draw latches, as well as wire-braided, corrosion-resistant vibration isolators.

For all Marine installations that use Siemens XTRI-series devices, a specific faceplate (Model USCG-XPLATE) is required, and must be ordered separately. The faceplate helps diminish RFI exposure, and fits on the front of each XTRI interface module.

Additionally, the system batteries (Model BP-62) are used to provide back-up system power. Each battery, which is rated at 16AH, can withstand temperatures as low as -40°F/°C and as high as +176°F (+80°C).

#### Application Data

The equipment used in Marine applications generates and radiates radio-frequency energy. If the equipment is not installed properly, and is attempted to be used in ways that are different from the instructions found in the manual (**IOM: A6V10519176**), this could subsequently result in interference with radio communications.

With the exception of the inner door, the Marine enclosure (Model FH-2071-UM) is shipped complete. A trained Siemens representative is required to wire and assemble the Marine equipment at the site. Actual FACPs are delivered in individual parts. Pre-installed components include one (1) EMI filter, as well as one (1) system battery bracket.

The following components must be ordered separately:

- One (1) system operating unit
- One (1) 170W power supply, electronic components (according to specified order)
- Two (2) 16AH batteries, installation material, instructions, and option modules (as required)

**See:** Pages 4-6 for the complete list of individual, orderable parts.

**Note:** Desigo Marine Fire and Detection Equipment is UL 864 10th Edition Listed, USCG Approved (per CFR, Title 46, Subpart 161.002/ 60/ 0). (Refer to Desigo's 252 / 504-point addressable panel datasheet, #6815, for more data.)



## Desigo Marine Equipment

### Standard Marine Enclosure

Model FH-2071-UM is the enclosure designed for use in Desigo Marine and other harsh-environment installations. One (1) outer door, one (1) backbox and one (1) battery bracket come standard in each Model FH-2071-UM shipment. The inner door, Model FHD2004-U1 – only available in Black – houses the system operating units (Models FCM2018-U2 and FCM2019-U2). The system-inclusive back box supports the fire-terminal board (Model FTI2001-U1), and optionally supports the DACT (Model FCA2015-U1), as well as the releasing module (Model XCI2001-U1).

#### Approximate size:

30.6" ( 77.7 cm.) (H)  
22" ( 55.9 cm.) (W)  
6.31" (16 cm.) (D)

**Approximate weight:** 48 Lbs. (21.8 kg.)

## Optional Accessories

### Back-up Batteries for Marine Applications



Used in Marine applications, the Model BP-62 battery set provides auxiliary emergency standby power at 24VDC, in case of system-power failure from the main source. Each battery, which is rated at 16AH, can operate in temperatures ranging as low as -40 degrees, and as high as 176°F (80°C). Model BP-62 contains two (2) batteries per order.

Siemens batteries are generally designed by major suppliers. As the manufacturers improve the design of their batteries, the amp-hour rating may change. However, the dimensions of the batteries will remain the same to ensure proper fit in the system enclosures, as specified.

**Note:** Model BP-62 is required for use in Marine applications, and should only be connected when each panel is commissioned.

### Metal Cover Plate – XTRI-Series Devices

Model USCG-XPLATE is a metal cover faceplate used in Marine applications. When Siemens XTRI-Series interface modules are used, the plate is then required for use, and is fitted over each device, protecting it from excessive RFI.

#### Approximate size:

5" (12.7 cm.) (H)  
5" (12.7 cm.) (W)  
0.25" (0.6 cm.) (D)

#### Approximate weight:

3.5 oz. (99.2 g.)



Model  
USCG-XPLATE

## Desigo System Components

### Operating Interface Unit

The Operating Interface Unit (Model FCM2018-U2 or Model FCM2019-U2) functions as the operating interface and central microprocessor for Model FC2025 and FC2050 control panels.

Either operating interface unit offers multi-use capability for the end-user to promptly 'Acknowledge' events; to quickly control the NACs of the FACP, and to reset the respective panel manually.

Detailed data relative to the nature and location of events can also be displayed, via a backlit, 2" (5.1 cm.) --x-- 4.75" (12.1 cm.) LCD screen and the four-way navigation push button at the top of the FACP.

**Note:** For applications in [Canada](#) that require a Desigo operating unit with LEDs, Model FCM2035-U2 must be ordered.

### Periphery Boards

The periphery boards (Models FCI2016-U1 and FCI2017-U1) serve as the main operating components for Desigo 252 / 504-point addressable FACPs. Each module operates and monitors input-device identity; as well as controls the signaling-line circuits (SLCs) that communicate with smoke detectors and other field devices (i.e. – C-NET).

### Power Supply

All system functions are powered internally from the 170W power supply, Model FP2011-U1, which is housed in the Marine enclosure, FH-2071-UM. Each power supply provides primary, 24VDC nominal power for routine system functionality to the Desigo 252-point addressable panel (Model FC2025) and the 504-point addressable panel (Model FC2050).

The 170-Watt power supply incorporates a 4.0A, non-resettable slow-blow fuse on the primary input, and includes a built-in AC-line filter for surge and noise suppression. Model FP2011-U1 mounts in the panel's enclosure, and there are no serviceable parts to be maintained. Model FP2011-U1 is filtered and regulated, and is rated at 6.5Amps.

## Desigo Optional Accessories

### Network Module

The SafeDLINK network module (Model FN2001-U1) is used to network 16 FACPs or fire terminals, via the FCnet system bus. Model FN2001-U1 is plugged into the Standard Operating Unit (Models FCM2018-U2 / R2) or the Operating Unit with LEDs (Models FCM2019-U2 / R2).

Model FN2001-U1, which connects to system input / output bus, has ground-fault monitoring, as well as an integrated degrade-mode feature. Redundant networking is accomplished with one (1) network module per panel [Simple Loop Trouble]. Electrical isolation exists between the system bus and the FACP.

## Desigo Optional Accessories (cont.)

### Digital Alarm Communicator Transmitter

The Digital Alarm Communicator Transmitter (DACT) is used to provide communication between Desigo fire alarm control panels (Models FC2025 and FC2050); one (1) fire terminal (Model FT2050) and an off-premise, remote-monitoring station.

Each DACT (Model FCA2015-U1) can also support additional 3rd-party Internet Protocol (IP) and Global System Mobile (GSM) communication technologies. Model FCA2015-U1 is UL Listed as compatible with 3rd-party IP and GSM dialers.

Model FCA2015-U1 connects to the system periphery board, respectively, and it allows for remote transmission of alarms and events via a generic telephone line. Model FCA2015-U1 also supports two (2) lines and four (4) accounts, via transmitting serial data (including the event's address) to the monitoring station

### Remote Display Terminals (RDTs)

Model FT2015-U2 / R2 is a remote display terminal that shows up-to-date status of Desigo 252 / 504-point addressable FACPs. Each RDT has three (3) control buttons for 'acknowledging' events, 'silencing' audible circuits and 'resetting' the system. Additionally, there are three (3) user-programmable buttons. Meanwhile, Model FT2014-U2 / R2 RDT has one (1) local-sounder silence button, which operates when any events are displayed on the system.

The RDTs require 24VDC nominal power, which can be received from the Desigo FACP or from another UL Listed, 24VDC power source. Additionally, all RDTs must be connected to the RS-485 communication bus (Model FCA2016-U1) originating from the FACP.

### Releasing Module

The releasing module (Model XCI2001-U1) supports activation of releasing valves in pre-action / deluge systems (including double-interlock pre-action systems). Activation can be event-controlled or performed by addressable manual pull stations. The releasing module is installed on the periphery board, and supports 'Class B' releasing circuits.

When installed on Models FC2025 / FC2050 FACPs, the releasing module contains an integral manual-disconnect switch for releasing circuits. This essential feature protects the releasing circuits from any unintended, accidental discharge during routine maintenance.

### NAC Expansion Module

The notification-appliance circuit (NAC) expansion module (Model FCI2011-U1) optionally provides additional NACs to each Desigo 252 / 504-point addressable FACP:

- one (1) 'Class A' or
- two (2) 'Class B' NACs

Each NAC expansion module is rated at 3 Amps, and is monitored for open-line and short-circuiting conditions.

## Details for Ordering

Desigo Marine Equipment		
MODEL OR TYPE	PART NUMBER	PRODUCT
BP-62*	S54400-Z62-A1	16AH system back-up battery (Qty. 2 per order)
FH-2071-UM*	S54400-C144-A1	Enclosure used for Marine installs, Black
USCG-XPLATE*	S54400-F1-A1	Metal cover plate for XTRI Series Interface Modules

\* Denotes orderable, USCG Approved item, meets USCG's requirements for use in applications requiring an *Exceptional Degree of Protection*.

See: **Compatible Devices** Section for a full list of Siemens orderable parts compatible with Desigo Marine Fire and Detection Equipment.

## Related Documentation

Data Sheet Number	Description
6815	Desigo Fire Safety (252/504-point addressable systems)
6304	XTRI Series Interface Modules (intelligent detection devices)

## Compatible Devices

### Control Panels

MODEL OR TYPE	PART NUMBER	PRODUCT
FC2025-US*	S54400-C4-A1	252-Point Addressable Panel Kit
FC2050-US*	S54400-C5-A1	504-Point Addressable Panel Kit

### System Modules

MODEL OR TYPE	PART NUMBER	PRODUCT
FCI2016-U1*	S54400-A55-A1	252-Point System Periboard
FCI2017-U1*	S54400-A56-A1	504-Point System Periboard
FCM2018-U2*	S54400-C40-A1	Standard Operating Unit
FCM2019-U2*	S54400-C41-A1	Operating Unit with LEDs
FP2011-U1*	500-450222	170 Watt Power Supply

### For Canada, order:

MODEL OR TYPE	PART NUMBER	PRODUCT
FCM2035-U2*	S54400-C139-A1	Operating Unit with LEDs (ULC Listed)

\* Denotes orderable, USCG Approved item, meets USCG's requirements for use in applications requiring an *Exceptional Degree of Protection*.

Compatible Devices (cont.)		
Optional System Modules		
MODEL OR TYPE	PART NUMBER	PRODUCT
FCA2015-U1*	S54400-A63-A1	Digital Alarm Communication Transmitter (DACT)
FCA2016-U1*	S54400-A39-A1	RS-485 Communication Bus
FCI2011-U1*	S54400-A54-A1	NAC Expansion Module
FHA2031-U1*	S54400-B44-A1	DIN Rail Kit
FHD2004-U1*	S54400-B52-A1	Inner Door
FN2001-U1*	S54400-A60-A1	SafeDLINK Network Module
XCI2001-U1*	S54400-A69-A1	Releasing Module
FT2014-U2*	S54400-F67-A1	Remote Display Terminal, black
FT2014-R2*	S54400-B75-A1	Remote Display Terminal, red
FT2015-U2*	S54400-F68-A1	Desigo Remote Display Terminal (with control), black
FT2015-R2*	S54400-B15-A1	Desigo Remote Display Terminal (with control), red

H and X-Series Addressable Devices		
MODEL OR TYPE	PART NUMBER	PRODUCT
HZM*	500-034850	Remote Conventional Zone Module
HMS-M*	500-033450	Manual Pull Station – Metal
HTRI-M*	500-034000	Mini Interface Module
HTRI-D**	500-033360	Intelligent Interface – Dual
HTRI-R**	500-033300	Intelligent Interface with Relay
HTRI-S**	500-033370	Intelligent Interface Module
XMS-M*	S54321-F19-A1	Addressable Single Action Metal Pull Station with Isolation
XTRI-M*	S54370-B4-A1	`Class X' Mini Input, Intelligent Device Interface Module (with built-in isolator)
XTRI-D**	S54370-B2-A1	Dual Input Module
XTRI-R**	S54370-B1-A1	Single Input Module (with relay)
XTRI-S**	S54370-B3-A1	Single Input Module

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\*\* In correlation with Model HTRI / XTRI Series of intelligent devices Used specifically in Marine installations:  
The plastic faceplate included with each HTRI Series shipment must not be used. Instead, use the metal plate with ground wire – Model USCG-HPLATE or USCG-XPLATE– which must be ordered separately.

Compatible Devices (cont.)		
Intelligent   Addressable Devices		
MODEL OR TYPE	PART NUMBER	PRODUCT
FDCIO422*	S54322-F4-A1	4 Input / 4 Output Module
FDCIO-EOL*	S54312-F7-A1	End-Of-Line Resistor
TB-EOL*	S54322-F4-A2	Terminal Block for FDCIO-EOL
FDO421*	S54320-F4-A1	Optical Detector
FDT421*	S54320-F5-A1	Thermal Heat Detector
FDOT421*	S54320-F6-A1	Optical + Heat Detector
FDOOT441	S54320-F7-A1	Dual Optical + Heat Detector
FDOOTC441	S54320-F8-A1	Dual Optical + Heat + CO Detector
Conventional Devices		
MODEL OR TYPE	PART NUMBER	PRODUCT
OP121*	S54372-F1-A1	Photoelectric Smoke Detector
OH121*	S54372-F2-A1	Multi-Sensor Smoke Detector
HI121*	S54372-F3-A1	Thermal Heat Detector
TM121	S54370-S12-A1	Test Magnet
DT-135WP*♦	500-087260	Rate Compensation / Fixed Temp. 135°F (57.2°C) Detector, Weatherproof
DT-200WP*♦	500-087261	Rate Compensation / Fixed Temp. 194°F (90°C) Detector, Weatherproof
DT-140EP*♦	500-688976	Rate Compensation / Fixed Temp. 140°F (60°C) Thermal Detector, Explosion-proof
DT-190EP*♦	500-688978	Rate Compensation / Fixed Temp. 190°F (87.8°C) Thermal Detector, Explosion-proof
Detector Bases		
MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11*	500-094151	Detector Base Assembly
DB-11E*	500-094151E	Detector Base Assembly
DB11-SEAL*	500-695622	Seal Package: 24 pieces per order
DB-SEAL	500-692211	Detector Gasket: 36 pieces per order
DB2-HR *	S54370-F12-A1	Detector Relay Base

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♦ Denotes devices are USCG Approved for use with Siemens XTRI-series intelligent devices, and still can be used with conventional devices used on System 3™ and MXL® panels.

Compatible Devices (cont.)		
Specialized Devices		
MODEL OR TYPE	PART NUMBER	PRODUCT
FDBZ492*	S54319-B22-A1	A two-wire addressable or conventional duct detector (without relays) designed for direct use on heating, ventilating and air-conditioning (HVAC) air-duct systems. When equipped, the air-duct detector housing will signal the presence of smoke being carried through the system.
FDBZ492-HR*	S54319-B23-A1	A two-wire addressable duct detector (with relays) designed for direct use to HVAC air-duct systems and works with the Remote Test Switch (FDBZ492-RTL). This part has a programmable relay base, and when equipped, the addressable air-duct detector housing will signal the presence of smoke being carried through the air-duct system.
FDBZ492-R*	S54319-B24-A1	A two-wire conventional duct detector with relays designed for direct use on HVAC air-duct systems. This detector has a relay base, and when equipped with conventional air-duct housing, it will signal the presence of smoke being carried through the system.
FDBZ492-RP*	S54319-B25-A1	A four-wire conventional duct detector with relays and a built-in power supply. Housing is designed for direct use to HVAC air-duct systems. There is a relay base with a built-in power source. When equipped with conventional air-duct housing, this duct detector will signal the presence of smoke being carried through the duct system.
FDBZ-WT*	S54319-B26-A1	An optional, separate watertight NEMA 4X enclosure (Model FDBZ-WT) that provides added watertight protection for any of the Model FDBZ492-series duct housings. The duct housing fits into the separate 4X enclosure. This part allows the air-duct detector housing to be installed in the separate enclosure, and can be used in either an outdoor area or in locations where excessive moisture is prevalent.
FDBZ492-RTL*	S54319-B27-A1	Device is used for manual testing via a key-switch for duct-housing Models FDBZ492-R, FDBZ492-RP and FDBZ492-HR. Device mounts remotely from the conventional and addressable air-duct housing, allowing for manual relay-output control. The duct detector remote key-switch also shows the detector's current state.

**Note:** Refer to Desigo datasheet, #6156 for more information on FDBZ-Series Air-Duct Housings.

Compatible Devices (cont.)		
Notification Appliances		
MODEL OR TYPE	PART NUMBER	PRODUCT
AS-75-CR-WP*	500-636015	`AS' Strobe: 75CD ceiling Weatherproof, red
AS-75-R-WP*	500-636016	`AS' Strobe: 75CD wall Weatherproof, red
WPBBS-R*	500-636137	`AS' Strobe: Weatherproof back box, red
MBDC-6*	500-688449	6" (15.2 cm.) DC Motor Bell
MBDC-10*	500-688448	10" (25.4 cm.) DC Motor Bell
ST-75-CR-WP*	500-636104	`ST' Strobe: Weatherproof Ceiling, red
ST-75-R-WP±*	500-636106	`ST' Strobe: Weatherproof Wall, red
ST-HMC-CR-WP*	500-636177	`ST' Strobe: HI Multi Candela Weatherproof Ceiling, red
ST-HMC-R-WP*	500-636179	`ST' Strobe: HI Multi Candela Weatherproof Wall, red
ST-MC-R-AR	500-650224	`ST' Strobe: Agent Releasing strobe, red
WPSBBS-R*	500-636139	`ST' Strobe: Weatherproof back box, red
ZB-R	500-636193	`Z' Series Mounting Backbox, red
ZH-R*	500-636159	`Z' Series appliance, red
ZH-HMC-R±	500-636163	`Z' Series appliance: HI Multi Candela Wall, red
ZH-MC-CR*	500-636165	`Z' Series appliance: Multi Candela Ceiling, red
ZR-MC-R±	500-636169	`Z' Strobe: Multi Candela Wall, red
ZR-MC-CR±	500-636173	`Z' Strobe: Multi Candela Ceiling, red

\* For Marine installations and/or where vibration is a concern, remove the cover plate on the device. Punch out the box, and secure the device by using the two (2) #6 self-tapping screws that is supplied.

\* Denotes orderable, USCG Approved item, meets USCG's requirements for use in applications requiring an *Exceptional Degree of Protection*.



Compatible Devices (cont.)		
MSM Series		
MODEL OR TYPE	PART NUMBER	PRODUCT
MSM-K <sup>‡</sup>	500-698215	Manual Station, Metal (with Allen Key)
MSM-KD <sup>‡</sup>	500-698216	Double-Action Manual Station, Metal (with Allen Key)
MSM-K-WP <sup>‡</sup>	500-698217	Manual Station, Metal (with Allen Key), Weatherproof
MSM-KD-WP <sup>‡</sup>	500-698218	Double-Action Manual Station, Metal (w/ Allen Key), Weatherproof
MSM-EXP <sup>‡</sup>	500-698219	Manual Station, Metal (with Allen Key), Explosion-proof
MSM-INST <sup>‡</sup>	500-698220	Manual Station, Metal (with Allen Key), Institutional
MSM-BOX <sup>‡</sup>	500-698221	Surface Backbox (for MSM-series Manual Stations)

Compatible Devices (cont.)		
MSM Series - Canada		
MODEL OR TYPE	PART NUMBER	PRODUCT
MSM-K-C <sup>‡</sup>	UDI:500-698215-C	Manual Station, Metal (with Allen Key) ULC Listed
MSM-KD-C <sup>‡</sup>	UDI:500-698216-C	Double-Action Manual Station, Metal (with Allen Key) ULC Listed
MSM-K-WP-C <sup>‡</sup>	UDI:500-698217-C	Manual Station, Metal (with Allen Key), Weatherproof ULC Listed
MSM-KD-WP <sup>‡</sup>	UDI:500-698218-C	Double-Action Manual Station, Metal (with Allen Key), Weatherproof ULC Listed
MSM-EXP-C <sup>‡</sup>	UDI:500-698219-C	Manual Station, Metal (with Allen Key), Explosion-proof ULC Listed
MSM-INST-C <sup>‡</sup>	UDI:500-698220-C	Manual Station, Metal (with Allen Key), Institutional ULC Listed
MSM-BOX-C <sup>‡</sup>	UDI:500-698221-C	Surface Backbox (for MSM-series Manual Stations) ULC Listed

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‡ Denotes devices are USCG Approved for use with Siemens XTRI-series intelligent devices, and still can be used with conventional devices used on System 3™ and MXL® panels.

**NOTICE** – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

**SIEMENS**

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